Final Recommendation for the Readmissions Reduction Incentive Program for Rate Year 2019

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Health Services Cost Review Commission

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This document contains the final staff recommendations for updating the Maryland Hospital Readmissions Reduction Incentive Program (RRIP), for RY 2019, ready for Commission action. Final recommendations are updated from the draft recommendations presented at the April 2017 Commission meeting.

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LIST OF ABBREVIATIONS

ACA	Affordable Care Act
APR-DRG	All-patient refined diagnosis-related group
ARR	Admission-Readmission Revenue Program
CMS	Centers for Medicare & Medicaid Services
CMMI	Center for Medicare and Medicaid Innovation
CRISP	Chesapeake Regional Information System for Our Patients
CY	Calendar year
FFS	Fee-for-service
FFY	Federal fiscal year
HRRP	Hospital Readmissions Reduction Program
HSCRC	Health Services Cost Review Commission
ICD-10	International Classification of Disease, 10th Edition
PAU	Potentially avoidable utilization
PQI	Prevention quality indicator
RRIP	Readmissions Reduction Incentive Program
RSSP	Readmissions Shared Savings Program
RY	Rate year
SOI	Severity of illness
YTD	Year-to-date

INTRODUCTION

The purpose of this report is to make recommendations for updating the Readmissions Reduction Incentive Program (RRIP) for the state rate year (RY) 2019 methodology.

The final recommendation updates the readmission reduction targets for RY 2019 in order to align with the All-Payer Model's readmission reduction target for Calendar Year (CY) 2018, and also includes the following policy elements:

- Updates the base period for the RY 2019 RRIP to fall under the International Classification of Disease, 10th Edition (ICD-10) time period;
- Evaluates Calendar Year 2016 year-to-date (YTD) performance versus the All Payer Agreement requirements, and recommends Medicare improvement targets to ensure continued progress; and
- Develops all-payer targets for attainment and improvement with established preset rewards/penalties scales for RY 2019 RRIP hospital revenue adjustments.

BACKGROUND

Medicare Hospital Readmissions Reduction Program

The United States health care system currently has an unacceptably high rate of preventable hospital readmissions. These excessive readmissions generate considerable unnecessary costs and substandard care quality for patients. A readmission is defined as an admission to a hospital within a specified time period after a discharge from the same or another hospital. Under authority of the Affordable Care Act (ACA), the Centers for Medicare & Medicaid Services (CMS) established its Medicare Hospital Readmissions Reduction Program (HRRP) in federal fiscal year (FFY) 2013. Under this program, CMS calculates the average risk-adjusted, 30-day hospital readmission rates for patients with certain conditions using claims data. If a hospital's risk-adjusted readmission rate for such patients exceeds that average, CMS penalizes it in the following year for all Medicare admissions; the penalty is in proportion to the hospital's rate of excess readmissions. Penalties under the HRRP were first imposed in FFY 2013, during which the maximum penalty was 1 percent of the hospital's base inpatient claims. The maximum penalty increased to 2 percent for FFY 2014 and 3 percent for FFY 2015 and beyond. CMS uses three years of previous data to calculate each hospital's readmission rate. For penalties in FFYs 2013 and 2014, CMS focused on readmissions occurring after initial hospitalizations for three conditions: heart attack, heart failure, and pneumonia. For penalties in FFY 2015, CMS included two additional conditions: chronic obstructive pulmonary disease and elective hip or knee replacement. In the future, CMS intends to continue with these conditions and will add the

assessment of performance following initial diagnosis of coronary artery bypass graft surgery to the list for FFY 2017.[1]

Overview of the Maryland RRIP Program

Because of its long-standing Medicare waiver for its all-payer hospital rate-setting system, special considerations were given to Maryland, including exemption from the federal HRRP. The ACA requires Maryland to have a similar program, and to achieve the same or better results in costs and outcomes in order to maintain this exemption. The Health Services Cost Review Commission (HSCRC, or "Commission") made an initial attempt to encourage reductions in unnecessary readmissions when it created the Admission-Readmission Revenue (ARR) program in RY 2012. The ARR program, which was adopted by most Maryland hospitals, established "charge per episode" constraints on hospital revenue, providing strong financial incentives to reduce hospital readmissions. In RY 2014, global budgets supplanted the charge per case system, and the ARR program was replaced with a Readmissions Shared Savings Policy (RSSP). The RSSP was adopted to achieve savings that would be approximately equal to those that would have been expected from the federal Medicare HRRP. From RY 2014 to RY 2016, the HSCRC RSSP decreased hospital inpatient revenues by an average annual savings of 0.20 percent of total revenue, resulting in a cumulative average savings of 0.60 percent of total revenue through RY 2016. In RY 2017, the Commission expanded the savings policy to include potentially avoidable utilization (PAU), and increased the total reduction percentage to 1.25% of total revenue.[2]

The All-Payer Model Agreement with CMS replaced the requirements of the ACA by establishing two sets of requirements to maintain exemptions from federal programs for readmissions and hospital-acquired conditions. One set of requirements established performance targets for readmissions and complications, while the second set of requirements ensured that the amount of revenue adjustments in Maryland's quality-based programs matches CMS levels in aggregate. For readmissions, Maryland's Medicare fee-for-service (FFS) statewide hospital readmission rate must be equal to or below the national Medicare readmission rate by Calendar Year (CY) 2018. Maryland must also make annual progress toward this goal.

In order to meet the new Model requirements, the Commission approved a new readmissions program in April 2014—the RRIP—to further bolster the incentives to reduce unnecessary readmissions. The Performance Measurement Work Group established the following guiding principles for the RRIP:

- The measurements used for performance linked with payment must include all patients, regardless of payer.

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[1] For more information on HRRP, see https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html.

2 The PAU savings adjustment is the percentage of hospital inpatient revenue the state expects to save through reducing potentially avoidable utilization, defined as readmissions and Prevention Quality Indicators (PQIs)

- The measurements must be fair to hospitals.
- Annual targets must be established to reasonably support the overall goal of meeting or outperforming the national Medicare readmission rate by CY 2018.
- The measurements used should be mostly consistent with the CMS readmissions measure.
- The approach must include the ability to track progress.

The RRIP provided a positive increase of 0.50 percent of inpatient revenues in RY 2016 for hospitals that were able to meet or exceed a pre-determined reduction target for readmissions in CY 2014 relative to CY 2013. Readmission rates are adjusted for case-mix using all-patient refined diagnosis-related group (APR-DRG) severity of illness (SOI) (see Appendix I for details of indirect standardization method). The readmissions reduction target was set at 6.76 percent of for all-payer case-mix adjusted readmission rates.[3] The HSCRC did not impose penalties in the first year of the RRIP program.

The RRIP methodology was updated for RY 2017 to include higher potential rewards for hospitals that achieved or exceeded the readmission reduction target and established penalties for hospitals that did not achieve the required readmission reductions. Rewards and payment reductions were allocated along a linear scale commensurate with hospital improvement rates. The readmission reduction target for RY 2017 was set at 9.30 percent from CY 2013 all-payer case-mix adjusted readmission rates.[4] In RY 2018, staff updated the policy to include an attainment target to reward hospitals that achieve readmission rates lower than the 25th percentile of statewide rates, which in RY 2018 was projected to be 11.85 percent.[5] The reduction target for RY 2018 was set at 9.50 percent from CY 2013 all-payer case-mix adjusted readmission rates.[6] The cumulative 9.50% reduction target in readmissions CY 2016 over CY 2013 is less than the Commission initially expected it to be, since national readmissions *increased* in CY 2014, declined back to CY 2013 levels in CY 2015, and only began improving more quickly in CY 2016.

ASSESSMENT

In order to refine the methodology for RY 2019, the HSCRC has solicited input from the Performance Measurement Workgroup, and staff has worked extensively with contractors to

[3] This target was based on the excess levels of Medicare readmissions in Maryland in CY 2013 (8.78 percent), divided by five (representing each year of the Model Agreement performance period), plus an estimate of the reduction in Medicare readmission rates that would be achieved nationally (5.00 percent)
[4] The target was updated based on remaining national Medicare readmission rates and a projected 1.34 percent decline in the national Medicare readmission rates in CY 2015.
[5] The All-Payer Casemix-Adjusted Readmission Rate used in the Attainment Target calculation is adjusted for out-of-state readmissions. This attainment benchmark was also retrospectively applied to RY 2017 RRIP policy.
[6] The target was updated based on remaining Medicare readmission rates and a projected 0.80% decline in the national Medicare readmission rates in CY 2016 (see Figure 3 of RY 2018 RRIP policy).

model the readmission rate improvement needed to achieve the All-Payer Model Waiver Test. The Workgroup has discussed pertinent issues and potential changes to Commission policy for RY 2019, and reviewed the preliminary performance data. This final recommendation has been updated with the most recent case-mix and CMMI readmissions data, both of which now include final data with run-out for all of CY 2016.

Maryland's Performance to Date

Medicare Waiver Test Performance

At the onset of the All-Payer Model Agreement, HSCRC and CMS staff worked to refine the Medicare readmission measure specifications used to determine contract compliance. These changes narrowed the gap between the Maryland and national Medicare readmission rates to 7.93 percent for CY 2013 (or 1.22 percentage points), as the original estimates included planned admissions. The original logic also included specially-licensed rehabilitation and psychiatric beds for Maryland, but not for the nation (see Appendix II for details). Final calculations indicate that Maryland's Medicare readmission rate was 16.60 percent, compared with the national rate of 15.38 percent for CY 2013.

Using the revised final measurement methodology, Maryland performed better than the nation in reducing readmission rates in both CY 2014 and CY 2015, as well as CY 2016. The Model Agreement requires Maryland to make annual progress by reducing the gap by one-fifth each year, while keeping up with national reductions, to ensure Maryland's readmission rates are at or below the national level by the end of CY 2018. Figures 1 and 2 provide the calculations for this test and present results for CY 2014, CY 2015, and CY2016.

This final recommendation uses CMMI data for the full CY 2016 with run-out. During these 12 months, Maryland continued to reduce readmissions more rapidly than the nation. However, the nation reduced its readmissions rate more rapidly in CY 2016 than in prior years. Therefore, Maryland will need to factor this more rapid readmission reduction into its improvement target.

Figure 1 shows the calculations for determining the annual reduction required to close the gap between the Maryland and national Medicare readmission rates, as required by the All-Payer Model Agreement. Figure 2 shows the calculations for determining Maryland's progress in meeting the readmissions reduction target. Maryland is required to close the gap by 0.24 percentage points each year. For CY 2016 (three years into the readmissions test) the gap between Maryland and the nation must be equal to or less than 0.49 percentage points; according to most recent CY 2016 data, Maryland met this goal, as the gap is estimated to be 0.29 percentage points.[7]

[7] The stated 0.29% gap in the national-state readmission rates is current as of data received from CMMI on April 21, 2017.

Figure 1. All-Payer Model Maryland Medicare Readmissions Test – Gap Closure Requirement

CY 2013 National Medicare Readmission Rate	A	15.38%
CY 2013 MD Medicare Readmission Rate	B	16.60%
MD vs National Difference*	C=B-A	1.22%
Annual Reduction needed to Close the Gap	D=C/5	0.24%

Figure 2. All-Payer Model Maryland Medicare Readmissions Test – Maryland Progress to-Date

Calendar Year	National Rate	MD-National Required Difference	MD Required Rate	MD Actual Rate	MD-National Difference
E	**F**	**G=C -(D*Year X)**	**H=F+G**	**I**	**J=I-F**
CY 2014	15.49%	**0.98%**	16.47%	16.46%	**0.97%**
CY 2015	15.42%	**0.74%**	16.15%	15.95%	**0.53%**
CY 2016	15.31%	**0.49%**	15.80%	15.60%	**0.29%**

*Percentages are rounded up to two decimal points in the tables.

All-Payer Performance

While the CMS readmission waiver test is based on the unadjusted readmission rate for Medicare patients, the RRIP incentivizes performance improvement on the all-payer case-mix adjusted readmission rate. The All-Payer readmission rate reduction incentives align with the guiding principles and all-payer approach used in pay-for-performance programs in Maryland. The RRIP measure incorporates many of the elements of the CMS Medicare measure specifications (e.g., planned admissions), but also retains some differences (e.g., inclusion of psychiatric patients). See Appendix I for more details on the RRIP methodology.

Based on final CY 2016 data, the State achieved a 10.75% reduction in the all-payer case-mix adjusted readmission rate in CY 2016 compared to CY 2013, and 28 hospitals achieved the hospital improvement benchmark of at least a 9.50 percent readmission rate reduction. Since the incentive program also includes an attainment target, an additional 8 hospitals achieved the

attainment goal of a readmission rate lower than 11.85 percent.[8] Appendix III provides final hospital-level improvement rates for CY 2016.

CMMI and HSCRC Readmission Rate Differences

Beginning in CY 2016, and concurrent with the ICD-10 transition, HSCRC Medicare FFS readmissions improvement trends began to diverge from CMS Medicare FFS readmissions data. In understanding the ICD-10 impact, HSCRC and CMS noted that CMS' rehab exclusion was no longer properly excluding rehab cases under ICD-10. CMS revised the methodology for identifying rehab cases for exclusion; however, this update did not fully rectify the CMS-HSCRC divergence.

HSCRC staff has also tried to replicate the Center for Medicare and Medicaid Innovation (CMMI) methodology with the HSCRC data (e.g., removing psychiatric admissions and transfer logic differences). While the differences between the trends are attenuated, a substantial difference in readmission rate improvement trends remains. HSCRC staff and contractors continue to research potential reasons for this divergence, but the data discrepancy adds an additional layer of uncertainty to current projections.

To understand this discrepancy, the HSCRC has worked extensively with stakeholders, staff, and contractors. As presented during the April 2017 Commission meeting, year over year improvement of HSCRC and CMMI readmissions were trending in opposite directions in the early part of CY 2016. Modeling with HSCRC data using the CMMI readmission logic reduces the data discrepancy, and staff believes that the improvement and attainment targets are set high enough to take into account remaining data discrepancies. Staff will continue to examine readmission logic differences and investigate data discrepancies. These results will be reviewed with the performance measurement workgroup and other stakeholders, and if any substantive issues are found staff may revisit RY 2019 targets with the Commission.

All-Payer versus Medicare Readmissions

Each year, staff examines the trends in readmissions using the HSCRC case-mix data for all-payers and Medicare FFS. During the update of the RRIP policy for RY 2017, there were extensive discussions with stakeholders about the correlation between the all-payer and the Medicare FFS readmission rate in CY 2014 (in CY 2014, Maryland experienced much larger improvement in all-payer readmissions than Medicare).

As in the past, some stakeholders are advocating for changing RRIP to a Medicare only program due to the difficulties in converting the Medicare test to an all-payer target, and because of the importance of maintaining Maryland's waiver from Medicare HRRP. HSCRC staff continues to maintain that one of the defining features of Maryland's quality programs is that they are all-

[8] Again, the All-Payer Casemix-Adjusted Readmission Rate used in the Attainment Target calculation is adjusted for out-of-state readmissions.

payer, and believes it is an important benefit from the perspective of the CMMI, consumers, and other stakeholders. Specifically, hospitals continue to support that the RRIP be maintained on an all-payer basis and other payers (notably Medicaid) are very interested in the continuation of an All-Payer RRIP policy (see comment letters from the Maryland Hospital Association and DHMH Medicaid in Appendices VIII and IX).

Improvement Target Calculation Methodology for Rate Year 2019

As previously stated, Maryland is required to close one-fifth of the gap between the national and Maryland readmission rates, and to match the national decline in Medicare readmission rates each year. Although one-fifth of the National-Maryland gap in CY 2013 is 0.24 percentage points, it is challenging to predict national readmission rates and to set targets for the state prospectively. Furthermore, additional adjustment factors are necessary to convert the Medicare unadjusted readmission target to an all-payer case-mix adjusted target. HSCRC contractor Mathematica Policy Research modeled different specifications to predict national readmission rates. The target calculation models for CY 2017 assume that Maryland would match the annual decline in the national Medicare readmission rate, close half of the remaining gap between the Maryland and national rates, and then converts the target from an unadjusted Medicare readmission rates to an all-payer case-mix adjusted readmission rate.

Due to the transition to ICD-10, HSCRC is shifting the base period forward, so that both base period (CY 2016) and the performance period (CY 2017) are under ICD-10 coding. As such, a hospital improvement target will be calculated for CY 2017 compared to CY 2016. However, a re-based annual target could improperly shift improvement incentives from the hospitals that made early investments to reduce readmissions. Therefore, the CY 2016-2017 annual improvement target will be added to the final, cumulative statewide improvement in readmissions achieved in CY 2013-CY 2016 (RY 2018 case-mix adjusted readmission improvement) to calculate a **modified cumulative target**. Under a modified cumulative target, some hospitals that have already achieved substantial improvements in readmissions rates may have less incentive to continue to improve. However, staff notes that the statewide improvement target is based on all hospitals continuing to improve, and under the proposed targets, nearly all hospitals will have incentive to improve in order to maximize their reward.

The State will plan to reduce the remaining gap evenly over the last two years of the Model period. The targeted gap between the national and Maryland Medicare readmission rates by the end of CY 2017 would therefore be 0.15 percentage points (see Figure 3).

Figure 3. Calculation of the Readmissions Target Gap for CY 2017

CY 2016 National Medicare Readmission Rate	A	15.31%
CY 2016 MD Medicare Readmission Rate	B	15.60%
MD vs. National Difference	C=B-A	0.29%
Annual Gap Reduction needed to Close the Gap	D=C/2	0.15%
CY 2017 Target Gap	E=C-D	0.15%

Next, staff and their contractors considered different assumptions for estimating the National Medicare readmission rates in CY 2017 and CY 2018. Mathematica modeled multiple projections of the national reduction rate including average annual change, change from 2015 to 2016, and 12- and 24-month moving averages (Appendix VI). Maryland only has two years left to reach the national readmissions rate, and must keep up with any national reduction in addition to eliminating the remaining gap. Staff will therefore assume that the most conservative of the Mathematica models (i.e., the largest decrease) will represent the National Medicare readmission rate. Based on this model, the national readmission rate is projected to decline by 0.70 percent annually; however, Mathematica also modeled projections using a 1 percent and 1.5 percent decline due to fluctuations over the last three months in the CY 2016 decline (which was 1.06 percent based on data through September). Figure 4 calculates the MD Medicare Readmission Target Rate (Column D) and Reduction Target (Column E) based on these three estimates of the projected decline in the national readmission rate. Based on these projections of the National rate, the required Maryland Medicare readmission reduction ranges from 1.61 to 2.37 percent in CY 2017 compared to CY 2016.

Figure 4. Calculation of Required Maryland Medicare FFS Rate for CY 2017

Estimated National Decline	National	MD-National Target Gap	MD Readmission Rate	MD Annual Readmission Target
A	B=15.31%*(1+A)	C	D=B+C	E=D/15.60-1
-0.71%	15.20%	0.15%	15.35%	-1.61%
-1.00%	15.16%	0.15%	15.31%	-1.88%
-1.50%	15.08%	0.15%	15.23%	-2.37%

The final step in calculating the RRIP target, illustrated in Figure 5, is to convert the Medicare target to an all-payer reduction target. The all-payer adjustment was previously modeled using the simple difference between the change over time in the Medicare and all-payer readmission rates (Method 1 in Figure 5 below). Mathematica has also modeled the Medicare to All-Payer conversion using the simple ratio of the difference between the rates of change of the Medicare and All-Payer rates (Method 2), as well as using a monthly regression model of the ratios of change (Method 3). Figure 5 below presents the All-Payer reduction targets for the 3 options, assuming a National Medicare reduction of -0.71%, -1.0%, and -1.5%. For more details on how these reduction targets are calculated, please refer to Appendix VI.

Given the variability in these projections, staff is proposing an improvement target that is an approximate midpoint of the various projections presented in Figure 4. Staff is proposing a reduction target of -3.75% in the case-mix adjusted readmission rate, CY 2017 over CY 2016. Staff is further recommending that this improvement target be added to hospitals' previous improvement of 10.75%, for an aggregated improvement target of -14.50% through CY 2017.

Figure 5. Calculations for Converting the Medicare Reduction Target to an All-Payer Target

Projected National Reduction Rate for CY 2017	**-0.71%**	**-1.00%**	**-1.50%**
	All-Payer Reduction Needed in CY 2017 to Meet Waiver Test		
Method 1: Add difference in rates of change to FFS target (-4.73%**)**	**-6.38%**	**-6.65%**	**-7.15%**
Method 2: Use ratio of changes in rates to scale FFS target (0.5604)	**-2.95%**	**-3.43%**	**-4.32%**
Method 3: Use regression-based factor (.61) to scale FFS Target	**-2.71%**	**-3.15%**	**-3.97%**

Setting the Improvement Target

Some stakeholders expressed concerns that the -4.0% annual target presented in the draft policy marked a substantial increase compared to historical improvement targets, which were relatively more modest. Specifically, the MHA comment letter recommends that the annual improvement target should be set closer to -3.25 percent. Staff analyzed updated CY 2016 data (which showed a reduction in the National improvement for CY 2016), and considered stakeholder concerns, and now proposes an annual improvement target of -3.75%.

In establishing a one-year improvement target for the RRIP for RY 2019 (CY 2017 over CY 2016), staff notes that it is important to strike a reasonable balance between the desire to set a target that is not unrealistically high and the need to conform to the requirements of the Model Agreement. While some stakeholders have expressed concerns regarding the increase in the target from 9.5% to 14.5%, staff believe that with each passing year, underachievement in any particular year becomes increasingly hard to offset in the remaining years. Again, the consequence for not achieving the minimum annual reduction would be a corrective action plan and potentially the loss of the waiver from the Medicare HRRP. The consequences of not meeting the target are stated in the Model Agreement as follows:

> *If, in a given Performance Year, Regulated Maryland Hospitals, in aggregate, fail to outperform the national Readmissions Rate change by an amount equal to or greater than the cumulative difference between the Regulated Maryland Hospitals and national Readmission Rates in the base period divided by five, CMS shall follow the corrective action and/or termination provisions of the Waiver of Section 1886(q) as set forth in Section 4.c and in Section 14.*

Requiring Maryland to conform to the national Medicare HRRP would reduce our ability to design, adjust, and integrate our reimbursement policies consistently across all payers based on local input and conditions. In particular, the national program is structured as a penalty-only system based on a limited set of conditions, whereas the Commission prefers to have the flexibility to implement much broader incentive systems that reflect the full range of conditions and causes of readmissions on an all-payer basis.

Attainment Target Calculation Methodology for RY 2019

In RY 2018, staff added a new component to the RRIP methodology to provide rewards or penalties using the level of readmission rates, based on a statewide readmission attainment target (benchmark), similar to the current policy which sets an improvement target. Individual hospitals' performance relative to the statewide target would be tied to specific payment adjustment amounts, and hospitals would be evaluated on both attainment and improvement. The hospital's final payment adjustment would be based on the "better of" the two adjustments.

In the RY 2018 RRIP policy, staff set the attainment benchmark at the unweighted lowest 25th percentile for the year prior to the performance period, and prospectively adjusted this percentile downward to account for the continuous improvement needed to achieve the All-Payer Model waiver test. Consistent with RY 2018 attainment rate calculations, the lowest 25th percentile for CY 2016 Case-Mix Adjusted Readmissions Rates (adjusted for Out-of-State Readmissions) is 11.05%. Mirroring the 2% improvement factor from RY 2018, staff decreased the 11.05% by an additional 2 percent to further incentivize the continuous improvement needed to meet the All-Payer Model Waiver test. This 2 percent reduction yields an attainment target of 10.83% for CY 2017. Figure 6 provides the distribution of CY 2016 readmission rates.

Figure 6. CY 2017 All-Payer Readmission Rates and Estimated National Average

		CY 2016 Case-Mix Adjusted Readmission Rates Adjusted for Out-of-State Readmissions
Lowest Readmission Rate	A	7.19%
Lowest 25th percentile	B	11.05%
State Average	C	11.92%
Highest 25th percentile	D	12.57%
Highest Readmission Rate	E	14.97%

* Medicare out-of-state readmission ratios are used for adjustments.

Out-of-State Adjustment

As a continuation from the RY 2018 RRIP policy, staff worked with the Performance Measurement Workgroup to account for out-of-state readmissions, so as to account for readmission rates for border hospitals. Without such an adjustment, border hospitals appear to have lower readmissions that do not include readmissions to non-Maryland hospitals. Each month, HSCRC uses data from CMMI to create a ratio of out-of-state readmissions (Total Readmissions/In-State Readmissions), based on the most recent 12 months of data. Then, this ratio is applied to the case-mix adjusted readmissions rates to estimate an adjusted readmission rate that more accurately estimates border hospital readmissions.

Risk-Adjusting of Attainment Target

As in previous years, some stakeholders have raised concerns with the RRIP case-mix adjustment. In particular, some stakeholders feel the current model does not adequately risk-

adjust for socioeconomic status disparities (see Carefirst comment letter in Appendix VII). At this time, the HSCRC maintains that the State's case-mix adjustment sufficiently addresses case-mix differences among hospitals. Furthermore, the HSCRC staff continue to be concerned about adjusting for socio-demographic factors, which may accept lower quality of care for hospitals with greater socioeconomic disparities. Staff believe that under the current policy, the improvement target allows hospitals with higher socio-demographic burden to achieve favorable improvement results, and that these hospitals are therefore not being unduly penalized by the policies. Staff will evaluate further changes in policies, including sociodemographic adjustments, as it develops policies for RY 2020 and beyond.

Prospective Scaling for RY 2019 Policy

As always, staff carefully considered projected score distribution and reduction target feasibility to determine a prospective scale for both improvement and attainment targets for RY 2019. These scales are subject to change in the final RY 2019 RRIP policy, and have been built upon improvement and attainment targets using the most recent data modeling. The scaling models use the improvement and attainment targets as the inflection point, where hospitals that score exactly the improvement or attainment target will not experience a revenue adjustment. The improvement scale calculates maximum reward using the RY 2018 scale slope and the RY 2019 improvement target. For the attainment scale, the 10th percentile readmission rate for CY 2016 (with a 2% improvement adjustment) is used as the threshold for the maximum 1 percent reward. Based on the two data points (the inflection point of zero revenue adjustments, and the maximum reward), the rest of the scaling is extrapolated using a linear scale to reach the rates at which the maximum penalties of -2% are applied.

Improvement Scale

The current improvement scale uses an inflection point of the -14.50% modified cumulative improvement target, and provides potential negative revenue adjustments up to 2 percent and potential positive adjustments up to 1 percent.

Figure 7. RY 2019 Abbreviated Cumulative Improvement Scale

All Payer Readmission Rate Change CY13-CY17	Over/Under Target	RRIP % Inpatient Revenue Payment Adjustment
A	B	C
LOWER		1.0%
-25.0%	-10.5%	1.0%
-19.8%	-5.3%	0.5%
-14.5%	0.0%	0.0%
-9.2%	5.3%	-0.5%
-4.0%	10.5%	-1.0%
1.3%	15.8%	-1.5%

6.5%	21.0%	-2.0%
Higher		-2.0%

Attainment Scale

The current attainment scale uses an inflection point of the 10.83% attainment target, and provides potential negative revenue adjustments up to 2 percent and potential positive adjustments up to 1 percent.

Figure 8. RY 2019 Abbreviated Attainment Scale

All Payer Readmission Rate CY17	Over/Above Target From Target	RRIP % Inpatient Revenue Payment Adjustment
A	**B**	**C**
LOWER		1.0%
9.83%	-1.0%	1.0%
10.33%	-0.5%	0.5%
10.83%	0.0%	0.0%
11.33%	0.5%	-0.5%
11.83%	1.0%	-1.0%
12.33%	1.5%	-1.5%
12.83%	2.0%	-2.0%
Higher		-2.0%

RECOMMENDATIONS

Based on this assessment, HSCRC staff recommends the following updates to the RRIP program for RY 2019:

1. The RRIP policy should continue to be set for all-payers.
2. Hospital performance should continue to be measured as the better of attainment or improvement.
3. Due to ICD-10, RRIP should have a one-year improvement target (CY 2017 over CY 2016), which will be added to the actual improvement from CY 2016 over CY 2013, to create a modified cumulative improvement target.
4. The attainment benchmark should be set at 10.83 percent.
5. The reduction benchmark for CY 2017 readmissions should be -3.75% percent from CY 2016 readmission rates.
6. Hospitals should be eligible for a maximum reward of 1 percent, or a maximum penalty of 2 percent, based on the better of their attainment or improvement scores.

7. Staff will continue to work with CMS to review readmission logic and data discrepancies, and an update will be provided to the Commission if any substantive issues are found that warrant revisiting RY 2019 targets.

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APPENDIX I. HSCRC CURRENT READMISSIONS MEASURE SPECIFICATIONS

1) Performance Metric

The methodology for the Readmissions Reduction Incentive Program (RRIP) measures performance using the 30-day all-payer all hospital (both intra and inter hospital) readmission rate with adjustments for patient severity (based upon discharge all-patient refined diagnosis-related group severity of illness [APR-DRG SOI]) and planned admissions.

The measure is similar to the readmission rate that will be calculated for the new All-Payer Model with some exceptions. The most notable exceptions are that the HSCRC measure includes psychiatric patients and excludes oncology admissions. In comparing Maryland's Medicare readmission rate to the national readmission rate, the Centers for Medicare & Medicaid Services (CMS) will calculate an unadjusted readmission rate for Medicare beneficiaries. Since the Health Services Cost Review Commission (HSCRC) measure is for hospital-specific payment purposes, adjustments had to be made to the metric that accounted for planned admissions and SOI. See below for details on the readmission calculation for the RRIP program.

2) Adjustments to Readmission Measurement

- Planned readmissions are excluded from the numerator based upon the CMS Planned Readmission Algorithm V. 4.0. The HSCRC has also added all vaginal and C-section deliveries and rehabilitation as planned using the APR-DRGs rather than principal diagnosis (APR-DRGs 540, 541, 542, 560, 860). Planned admissions are counted in the denominator because they could have an unplanned readmission.
- Discharges for newborn APR-DRG are removed.
- Oncology cases are removed prior to running readmission logic.
- Rehabilitation cases as identified by APR-860 (which are coded after under ICD-10 based on type of daily service) are marked as planned admissions and made ineligible for readmission after readmission logic is run.
- Admissions with ungroupable APR-DRGs (955, 956) are not eligible for a readmission but can be a readmission for a previous admission.
- Hospitalizations within 30 days of a hospital discharge where a patient dies is counted as a readmission, however the readmission is removed from the denominator because there cannot be a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same or next day as the admission date of the subsequent admission, are removed from the denominator counts. Thus, only one admission is counted in the denominator, and that is the admission to the transfer hospital. It is this discharge date that is used to calculate the 30-day readmission window.
- Discharges from rehabilitation hospitals (provider IDs Chesapeake Rehab 213028, Adventist Rehab 213029, and Bowie Health 210333) are removed.
- Holy Cross Germantown 210065 (attainment only) and Levindale 210064 are included in the program; and
- Starting Jan 2016, HSCRC is receiving information about discharges from chronic

beds within acute care hospitals with the same data submissions. These discharges were excluded from RRIP for RY 2018.

- In addition, the following data cleaning edits are applied:
  - Cases with null or missing Chesapeake Regional Information System for our Patients (CRISP) unique patient identifiers (EIDs) are removed.
  - Duplicates are removed.
  - Negative interval days are removed.
  - HSCRC staff is revising case-mix data edits to prevent submission of duplicates and negative intervals, which are very rare. In addition, CRISP EID matching benchmarks are closely monitored. Currently, hospitals are required to make sure 99.5 percent of inpatient discharges have a CRISP EID.

3) Details on the Calculation of Case-Mix Adjusted Readmission Rate

Data Source:
To calculate readmission rates for RRIP, inpatient abstract/case-mix data with CRISP EIDs (so that patients can be tracked across hospitals) are used for the measurement period, plus an additional 30 days. To calculate the case-mix adjusted readmission rate for CY 2016 base period and CY 2017 performance period, data from January 1 through December 31, plus 30 days in January of the next year are used.

SOFTWARE: APR-DRG Version 34 (ICD-10) for CY 2016-CY 2017.

Calculation:

$$\text{Risk-Adjusted Readmission Rate} = \frac{\text{(Observed Readmissions)}}{\text{(Expected Readmissions)}} * \text{Statewide Readmission Rate}$$

Numerator: Number of observed hospital-specific unplanned readmissions.

Denominator: Number of expected hospital specific unplanned readmissions based upon discharge APR-DRG and Severity of Illness. See below for how to calculate expected readmissions adjusted for APR-DRG SOI.

Risk Adjustment Calculation:

- Calculate the Statewide Readmission Rate without Planned Readmissions.
  - Statewide Readmission Rate = Total number of readmissions with exclusions removed / Total number of hospital discharges with exclusions removed.

- For each hospital, calculate the number of observed, unplanned readmissions.
- For each hospital, calculate the number of expected unplanned readmissions based upon discharge APR-DRG SOI (see below for description). For each hospital, cases are removed if the discharge APR-DRG and SOI cells have less than two total cases in the base period data (CY 2016).
- Calculate the ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means that there were more observed readmissions than expected, based upon a hospital's case-mix. A ratio of < 1 means that there were fewer observed readmissions than expected based upon a hospital's case-mix.
- Multiply the O/E ratio by the statewide rate to get risk-adjusted readmission rate by hospital.

Expected Values:

The expected value of readmissions is the number of readmissions a hospital would have experienced had its rate of readmissions been identical to that experienced by a reference or normative set of hospitals, given its mix of patients as defined by discharge APR-DRG category and SOI level. Currently, HSCRC is using state average rates as the benchmark.

The technique by which the expected number of readmissions is calculated is called indirect standardization. For illustrative purposes, assume that every discharge can meet the criteria for having a readmission, a condition called being "at-risk" for a readmission. All discharges will either have zero readmissions or will have one readmission. The readmission rate is the proportion or percentage of admissions that have a readmission.

The rates of readmissions in the normative database are calculated for each APR-DRG category and its SOI levels by dividing the observed number of readmissions by the total number of discharges. The readmission norm for a single APR-DRG SOI level is calculated as follows:

Let:

N = norm
P = Number of discharges with a readmission
D = Number of discharges that can potentially have a readmission
i = An APR DRG category and a single SOI level

$$N_i = \frac{P_i}{D_i}$$

For this example, the expected rate is displayed as readmissions per discharge to facilitate the calculations in the example. Most reports will display the expected rate as a rate per one thousand.

Once a set of norms has been calculated, the norms can be applied to each hospital. In this example, the computation presents expected readmission rates for an individual APR-DRG category and its SOI levels. This computation could be expanded to include multiple APR-DRG categories or any other subset of data, by simply expanding the summations.

Consider the following example for an individual APR DRG category.

Expected Value Computation Example

1 Severity of Illness Level	2 Discharges at Risk for Readmission	3 Discharges with Readmission	4 Readmissions per Discharge	5 Normative Readmissions per Discharge	6 Expected # of Readmissions
1	200	10	.05	.07	14.0
2	150	15	.10	.10	15.0
3	100	10	.10	.15	15.0
4	50	10	.20	.25	12.5
Total	**500**	**45**	**.09**		**56.5**

For the APR-DRG category, the number of discharges with a readmission is 45, which is the sum of discharges with readmissions (column 3). The overall rate of readmissions per discharge, 0.09, is calculated by dividing the total number of discharges with a readmission (sum of column 3) by the total number of discharges at risk for readmission (sum of column 2), i.e., 0.09 = 45/500. From the normative population, the proportion of discharges with readmissions for each SOI level for that APR-DRG category is displayed in column 5. The expected number of readmissions for each SOI level shown in column 6 is calculated by multiplying the number of discharges at risk for a readmission (column 2) by the normative readmissions per discharge rate (column 5) The total number of readmissions expected for this APR-DRG category is the sum of the expected numbers of readmissions for the 4 SOI levels.

In this example, the expected number of readmissions for this APR-DRG category is 56.5, compared to the actual number of discharges with readmissions of 45. Thus, the hospital had 11.5 fewer actual discharges with readmissions than were expected for this APR-DRG category. This difference can also be expressed as a percentage.

APR-DRGs by SOI categories are excluded from the computation of the actual and expected rates when there are only zero or one at risk admission statewide for the associated APR-DRG by SOI category.

APPENDIX II. CMS MEDICARE READMISSION TEST MODIFICATIONS - VERSIONS 5 AND 6

In last year's policy, HSCRC included an itemized list of changes in version 5 of the CMS Medicare Readmission Test. These changes are listed below as a reminder. Beginning in CY 2016, the rehabilitation discharges are identified using UB codes to account for definition changes under ICD-10.

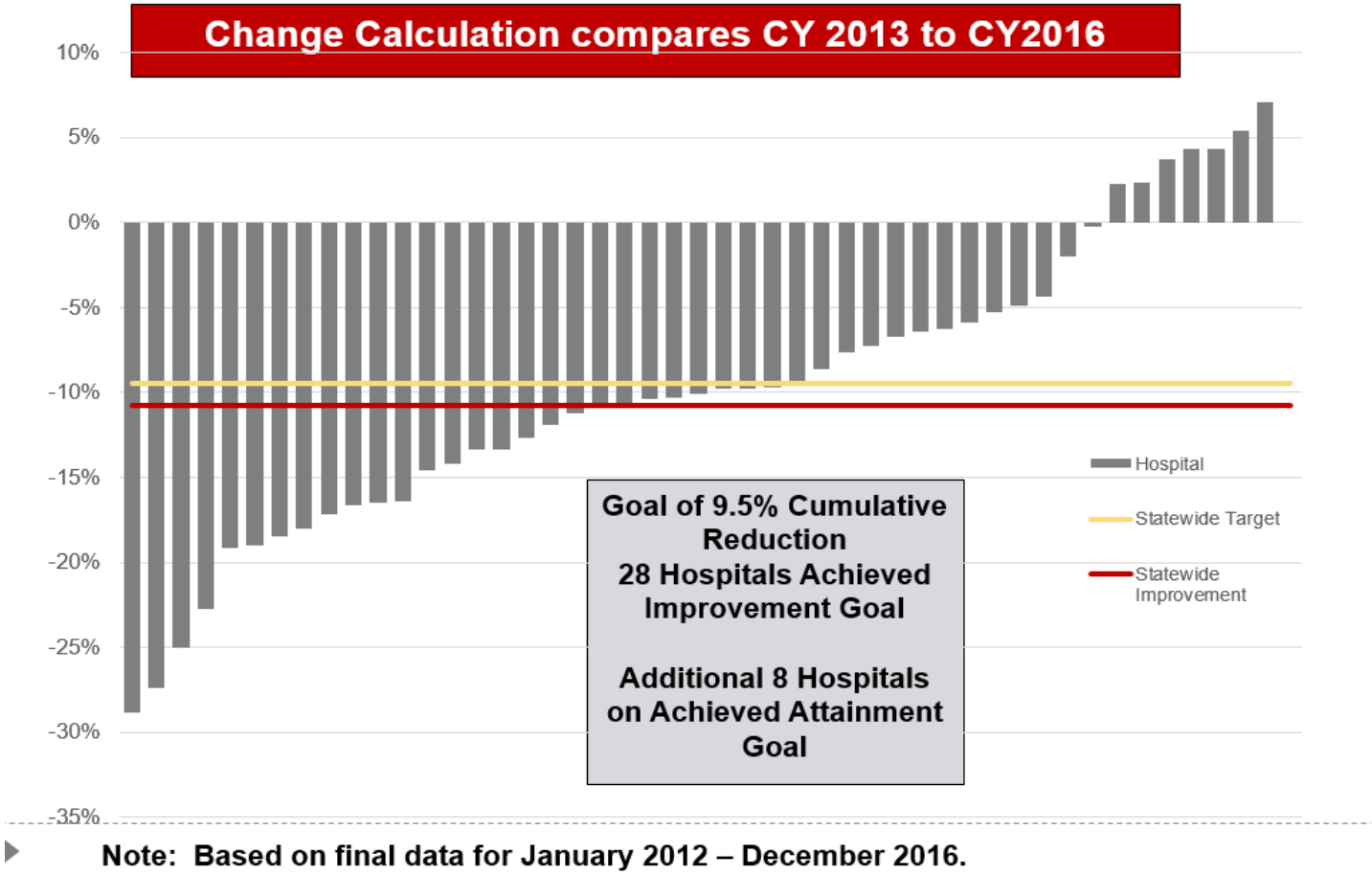
Below are the specification changes made to allow an accurate comparison of Maryland's Medicare readmission rates with those of the nation.

- Requiring a 30-day enrollment period in fee-for-service (FFS) Medicare after hospitalization to fully capture all readmissions.
- Removing planned readmissions using the CMS planned admission logic for consistency with the CMS readmission measures.
- Excluding specially-licensed rehabilitation and psychiatric beds from Maryland rates due to inability to include these beds in national estimates due to data limitations. In contrast, the HSCRC includes psychiatric and rehabilitation readmissions in the all-payer readmission measure used for payment policy.
    - Version 6 of the CMS measure changed to using UB codes to identify rehabilitation discharges due to ICD-10.
- Refining the transfer logic to be consistent with other CMS readmission measures.
- Changing the underlying data source to ensure clean data and inclusion of all appropriate Medicare FFS claims (e.g., adjusting the method for calculating claims dates and including claims for patients with negative payment amounts).

APPENDIX III. ALL-PAYER HOSPITAL-LEVEL READMISSION RATE CHANGE CY 2013-2016

The following figure presents the change in all-payer case-mix adjusted readmissions by hospital between CY 2013 and CY 2016.

Case-Mix Adjusted All-Payer Readmission Rate Change, CY 2013-2016, by Hospital



Note: Based on final data for January 2012 – December 2016.

APPENDIX IV. RY 2019 IMPROVEMENT AND ATTAINMENT SCALING – MODELED RESULTS

The following figure presents the proposed RY 2019 model scaling, using RY 2018 readmission rate results. Columns A and B show the hospital's actual case-mix adjusted readmission rates for CYs 2013 and 2016 respectively; column C shows the actual case-mix adjusted rate with out-of-state adjustment for CY 2016. Column D shows the percent change in in-state actual case-mix adjusted readmission rates between CY 2016 and CY 2013. Columns E through H present the scaling results using the proposed RY 2019 cumulative improvement methodology, and columns I through L present the scaling results using the proposed RY 2019 attainment methodology. Column K had an error in the Draft policy, which has been corrected below. Column M shows the revenue adjustment that is the better of attainment or improvement. (FY 2017 Permanent Global Budgets and Readmission Rates, used to calculate the revenue adjustments, may be updated in the final recommendation). The modeled results for RY 19 using CY 2016 actual data show an overall negative adjustment. This result is expected, since the proposed policy requires an improvement beyond the actual CY 2016 results.

					Improvement Scaling				Attainment Scaling				Final
HOSPITAL NAME	CY 13 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate Adjusted for Out of State	13-16 % Change In Case-Mix Adjusted Rate	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	FY18 Better of Attainment/ Improvement
	A	B	C	D =B/A- 1	E	F = D-E	G	H	I	J	K	L	M = (H or L)
ANNE ARUNDEL	12.10%	10.95%	11.45%	-9.50%	-14.5%	5.0%	-0.48%	-$1,409,163	10.83%	0.6%	-0.62%	-$1,839,782	-$1,409,163
ATLANTIC GENERAL	11.91%	8.93%	9.93%	-25.02%	-14.5%	-10.5%	1.00%	$389,660	10.83%	-0.9%	0.90%	$351,732	$389,660
BALTIMORE WASHINGTON	14.16%	12.27%	12.45%	-13.35%	-14.5%	1.2%	-0.11%	-$249,607	10.83%	1.6%	-1.62%	-$3,690,963	-$249,607
BON SECOURS	19.10%	14.75%	14.96%	-22.77%	-14.5%	-8.3%	0.79%	$488,677	10.83%	4.1%	-2.00%	-$1,242,136	$488,677
CALVERT	9.82%	8.83%	10.04%	-10.08%	-14.5%	4.4%	-0.42%	-$266,459	10.83%	-0.8%	0.79%	$501,708	$501,708
CARROLL COUNTY	12.18%	11.13%	11.41%	-8.62%	-14.5%	5.9%	-0.56%	-$652,382	10.83%	0.6%	-0.58%	-$677,061	-$652,382
CHARLES REGIONAL	11.79%	9.55%	11.03%	-19.00%	-14.5%	-4.5%	0.43%	$293,032	10.83%	0.2%	-0.20%	-$137,037	$293,032
CHESTERTOWN	13.21%	13.70%	14.95%	3.71%	-14.5%	18.2%	-1.73%	-$329,313	10.83%	4.1%	-2.00%	-$380,385	-$329,313

					Improvement Scaling				Attainment Scaling				Final
HOSPITAL NAME	CY 13 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate Adjusted for Out of State	13-16 % Change In Case-Mix Adjusted Rate	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	FY18 Better of Attainment/ Improvement
	A	B	C	D =B/A- 1	E	F = D-E	G	H	I	J	K	L	M = (H or L)
DOCTORS COMMUNITY	12.78%	11.45%	12.55%	-10.41%	-14.5%	4.1%	-0.39%	-$448,102	10.83%	1.7%	-1.72%	-$1,980,962	-$448,102
DORCHESTER	11.38%	11.87%	12.28%	4.31%	-14.5%	18.8%	-1.79%	-$434,442	10.83%	1.5%	-1.45%	-$352,397	-$352,397
EASTON	10.56%	10.81%	11.18%	2.37%	-14.5%	16.9%	-1.61%	-$1,606,430	10.83%	0.4%	-0.35%	-$350,676	-$350,676
FRANKLIN SQUARE	12.94%	12.38%	12.51%	-4.33%	-14.5%	10.2%	-0.97%	-$2,785,381	10.83%	1.7%	-1.68%	-$4,839,469	-$2,785,381
FREDERICK MEMORIAL	10.60%	9.56%	10.15%	-9.81%	-14.5%	4.7%	-0.45%	-$798,656	10.83%	-0.7%	0.68%	$1,219,805	$1,219,805
FT. WASHINGTON	13.06%	9.48%	12.57%	-27.41%	-14.5%	-12.9%	1.00%	$193,720	10.83%	1.7%	-1.74%	-$337,721	$193,720
G.B.M.C.	11.19%	10.49%	10.68%	-6.26%	-14.5%	8.2%	-0.79%	-$1,700,350	10.83%	-0.1%	0.15%	$325,793	$325,793
GARRETT COUNTY	7.04%	5.83%	8.37%	-17.19%	-14.5%	-2.7%	0.26%	$55,890	10.83%	-2.5%	1.00%	$217,645	$217,645
GOOD SAMARITAN	14.46%	11.85%	11.92%	-18.05%	-14.5%	-3.5%	0.34%	$536,117	10.83%	1.1%	-1.09%	-$1,731,841	$536,117
HARBOR	13.02%	12.14%	12.40%	-6.76%	-14.5%	7.7%	-0.74%	-$794,479	10.83%	1.6%	-1.57%	-$1,695,118	-$794,479
HARFORD	11.53%	12.15%	12.56%	5.38%	-14.5%	19.9%	-1.89%	-$889,286	10.83%	1.7%	-1.73%	-$814,245	-$814,245
HOLY CROSS	11.32%	11.58%	12.53%	2.30%	-14.5%	16.8%	-1.60%	-$5,432,468	10.83%	1.7%	-1.70%	-$5,784,203	-$5,432,468
HOLY CROSS GERMANTOWN		10.50%	10.88%		-14.5%				10.83%	0.1%	-0.05%	-$50,206	-$50,206
HOPKINS BAYVIEW	15.30%	14.19%	14.56%	-7.25%	-14.5%	7.2%	-0.69%	-$2,404,886	10.83%	3.7%	-2.00%	-$6,981,663	-$2,404,886
HOWARD COUNTY	11.80%	11.22%	11.39%	-4.92%	-14.5%	9.6%	-0.91%	-$1,607,369	10.83%	0.6%	-0.56%	-$987,979	-$987,979
JOHNS HOPKINS	14.69%	12.83%	13.88%	-12.66%	-14.5%	1.8%	-0.18%	-$2,376,105	10.83%	3.1%	-2.00%	-$27,186,416	-$2,376,105
LAUREL REGIONAL	13.89%	11.60%	12.38%	-16.49%	-14.5%	-2.0%	0.19%	$113,003	10.83%	1.6%	-1.55%	-$927,508	$113,003
LEVINDALE	13.73%	9.77%	9.77%	-28.84%	-14.5%	-14.3%	1.00%	$575,209	10.83%	-1.1%	1.00%	$573,320	$575,209

					Improvement Scaling				Attainment Scaling				Final
HOSPITAL NAME	CY 13 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate	CY 16 Case-Mix Adjusted Rate Adjusted for Out of State	13-16 % Change In Case-Mix Adjusted Rate	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	Target	Over/ Under Target	FY 18 Scaling	FY 18 Adjustment	FY18 Better of Attainment/ Improvement
	A	B	C	D =B/A- 1	E	F = D-E	G	H	I	J	K	L	M = (H or L)
MCCREADY	11.93%	12.77%	12.77%	7.04%	-14.5%	21.5%	-2.00%	-$58,611	10.83%	1.9%	-1.94%	-$56,963	-$56,963
MERCY	14.61%	11.91%	12.22%	-18.48%	-14.5%	-4.0%	0.38%	$819,911	10.83%	1.4%	-1.39%	-$3,012,099	$819,911
MERITUS	11.80%	11.04%	11.56%	-6.44%	-14.5%	8.1%	-0.77%	-$1,421,310	10.83%	0.7%	-0.73%	-$1,354,372	-$1,354,372
MONTGOMERY GENERAL	12.45%	10.68%	11.23%	-14.22%	-14.5%	0.3%	-0.03%	-$21,383	10.83%	0.4%	-0.40%	-$317,806	-$21,383
NORTHWEST	15.07%	12.18%	12.39%	-19.18%	-14.5%	-4.7%	0.45%	$559,907	10.83%	1.6%	-1.56%	-$1,964,635	$559,907
PENINSULA REGIONAL	11.02%	10.44%	11.10%	-5.26%	-14.5%	9.2%	-0.88%	-$2,073,714	10.83%	0.3%	-0.27%	-$637,696	-$637,696
PRINCE GEORGE	10.67%	10.64%	12.82%	-0.28%	-14.5%	14.2%	-1.35%	-$2,911,624	10.83%	2.0%	-1.99%	-$4,286,953	-$2,911,624
REHAB & ORTHO	7.70%	6.88%	7.34%	-10.65%	-14.5%	3.9%	-0.37%	-$39,639	10.83%	-3.5%	1.00%	$107,734	$107,734
SHADY GROVE	10.89%	9.83%	10.39%	-9.73%	-14.5%	4.8%	-0.45%	-$995,563	10.83%	-0.4%	0.44%	$967,860	$967,860
SINAI	14.27%	11.89%	12.00%	-16.68%	-14.5%	-2.2%	0.21%	$823,774	10.83%	1.2%	-1.17%	-$4,654,700	$823,774
SOUTHERN MARYLAND	11.92%	11.01%	13.82%	-7.63%	-14.5%	6.9%	-0.65%	-$1,068,052	10.83%	3.0%	-2.00%	-$3,271,987	-$1,068,052
ST. AGNES	13.85%	12.00%	12.11%	-13.36%	-14.5%	1.1%	-0.11%	-$253,713	10.83%	1.3%	-1.28%	-$2,990,084	-$253,713
ST. MARY	12.69%	10.61%	12.78%	-16.39%	-14.5%	-1.9%	0.18%	$139,286	10.83%	2.0%	-1.95%	-$1,511,151	$139,286
SUBURBAN	11.14%	10.92%	12.01%	-1.97%	-14.5%	12.5%	-1.19%	-$2,264,685	10.83%	1.2%	-1.18%	-$2,244,564	-$2,244,564
UM ST. JOSEPH	11.76%	10.55%	10.75%	-10.29%	-14.5%	4.2%	-0.40%	-$942,418	10.83%	-0.1%	0.08%	$188,553	$188,553
UMMC MIDTOWN	16.69%	14.82%	14.97%	-11.20%	-14.5%	3.3%	-0.31%	-$417,240	10.83%	4.1%	-2.00%	-$2,662,861	-$417,240
UNION HOSPITAL OF CECIL COUNT	9.80%	10.22%	13.08%	4.29%	-14.5%	18.8%	-1.79%	-$1,219,802	10.83%	2.3%	-2.00%	-$1,365,747	-$1,219,802

					Improvement Scaling				Attainment Scaling				Final
HOSPITAL NAME	**CY 13 Case-Mix Adjusted Rate**	**CY 16 Case-Mix Adjusted Rate**	**CY 16 Case-Mix Adjusted Rate Adjusted for Out of State**	**13-16 % Change In Case-Mix Adjusted Rate**	**Target**	**Over/ Under Target**	**FY 18 Scaling**	**FY 18 Adjustment**	**Target**	**Over/ Under Target**	**FY 18 Scaling**	**FY 18 Adjustment**	**FY18 Better of Attainment/ Improvement**
	A	**B**	**C**	**D =B/A- 1**	**E**	**F = D-E**	**G**	**H**	**I**	**J**	**K**	**L**	**M = (H or L)**
UNION MEMORIAL	14.35%	12.26%	12.50%	-14.56%	-14.5%	-0.1%	0.01%	$14,189	10.83%	1.7%	-1.67%	-$3,867,164	$14,189
UMMC	14.39%	12.67%	13.10%	-11.95%	-14.5%	2.5%	-0.24%	-$2,122,052	10.83%	2.3%	-2.00%	-$17,522,342	-$2,122,052
UPPER CHESAPEAKE	11.59%	10.91%	11.02%	-5.87%	-14.5%	8.6%	-0.82%	-$1,094,753	10.83%	0.2%	-0.19%	-$253,477	-$253,477
WASHINGTON ADVENTIST	11.33%	10.11%	11.31%	-10.77%	-14.5%	3.7%	-0.36%	-$533,508	10.83%	0.5%	-0.48%	-$721,855	-$533,508
WESTERN MARYLAND	12.41%	11.20%	12.08%	-9.75%	-14.5%	4.7%	-0.45%	-$777,424	10.83%	1.3%	-1.25%	-$2,152,372	-$777,424
STATE	**12.93%**	**11.54%**		**-10.75%**	-14.5%			**-$37,397,991**				**-$112,382,446**	**-$24,833,670**

Total Penalties	-31,900,092
Total Rewards	8,475,585

APPENDIX V. OUT-OF-STATE MEDICARE READMISSION RATIOS

The following figure presents calculation of out-of-state ratio adjustments using the Medicare readmission information from CMMI. The table is sorted by column G. Garrett County Hospital has the largest proportion of their readmissions occurring at hospitals outside of Maryland, which is equal to 44 percent of their in-state readmissions. These ratios are updated each month with the most recent 12 months of CMMI data.

HospName	Total Admissions	Total Readmissions	Readmissions Out of Maryland	Readmission Rate	MD Readmission Rate	**Out-of-State (OOS) Ratio**	Case-Mix Adjusted Readmission Rate	Case-Mix Adjusted Rate with OOS Adjustment
210001 - MERITUS	6293	1127	51	17.91%	17.10%	1.05	11.04%	11.56%
210002 - UNIVERSITY OF MARYLAND	6532	1219	40	18.66%	18.05%	1.03	12.67%	13.10%
210003 - PRINCE GEORGE	2670	477	81	17.87%	14.83%	1.20	10.64%	12.82%
210004 - HOLY CROSS	4600	781	59	16.98%	15.70%	1.08	11.58%	12.53%
210005 - FREDERICK MEMORIAL	5676	726	42	12.79%	12.05%	1.06	9.56%	10.15%
210006 - HARFORD	1652	307	10	18.58%	17.98%	1.03	12.15%	12.56%
210008 - MERCY	3905	474	12	12.14%	11.83%	1.03	11.91%	12.22%
210009 - JOHNS HOPKINS	11241	2122	160	18.88%	17.45%	1.08	12.83%	13.88%
210010 - DORCHESTER						1.03	11.87%	12.28%
210011 - ST. AGNES	4981	787	7	15.80%	15.66%	1.01	12.00%	12.11%
210012 - SINAI	5986	966	9	16.14%	15.99%	1.01	11.89%	12.00%
210013 - BON SECOURS	636	142	2	22.33%	22.01%	1.01	14.75%	14.96%
210015 - FRANKLIN SQUARE	7192	1314	14	18.27%	18.08%	1.01	12.38%	12.51%
210016 - WASHINGTON ADVENTIST	2911	433	46	14.87%	13.29%	1.12	10.11%	11.31%
210017 - GARRETT COUNTY	833	79	24	9.48%	6.60%	1.44	5.83%	8.37%
210018 - MONTGOMERY GENERAL	2934	410	20	13.97%	13.29%	1.05	10.68%	11.23%
210019 - PENINSULA REGIONAL	7767	1083	64	13.94%	13.12%	1.06	10.44%	11.10%

HospName	Total Admissions	Total Readmissions	Readmissions Out of Maryland	Readmission Rate	MD Readmission Rate	**Out-of-State (OOS) Ratio**	Case-Mix Adjusted Readmission Rate	Case-Mix Adjusted Rate with OOS Adjustment
210022 - SUBURBAN	5702	715	65	12.54%	11.40%	1.10	10.92%	12.01%
210023 - ANNE ARUNDEL	9289	1146	50	12.34%	11.80%	1.05	10.95%	11.45%
210024 - UNION MEMORIAL	4420	580	11	13.12%	12.87%	1.02	12.26%	12.50%
210027 - WESTERN MARYLAND HEALTH SYSTEM	4986	753	55	15.10%	14.00%	1.08	11.20%	12.08%
210028 - ST. MARY	2799	406	69	14.51%	12.04%	1.20	10.61%	12.78%
210029 - HOPKINS BAYVIEW MED CTR	6669	1476	38	22.13%	21.56%	1.03	14.19%	14.56%
210030 - CHESTERTOWN	949	155	13	16.33%	14.96%	1.09	13.70%	14.95%
210032 - UNION HOSPITAL OF CECIL COUNT	2333	366	80	15.69%	12.26%	1.28	10.22%	13.08%
210033 - CARROLL COUNTY	4296	605	15	14.08%	13.73%	1.03	11.13%	11.41%
210034 - HARBOR	2116	329	7	15.55%	15.22%	1.02	12.14%	12.40%
210035 - CHARLES REGIONAL	2611	380	51	14.55%	12.60%	1.16	9.55%	11.03%
210037 - EASTON	4561	629	21	13.79%	13.33%	1.03	10.81%	11.18%
210038 - UMMC MIDTOWN	1196	303	3	25.33%	25.08%	1.01	14.82%	14.97%
210039 - CALVERT	1976	290	35	14.68%	12.90%	1.14	8.83%	10.04%
210040 - NORTHWEST	4604	750	13	16.29%	16.01%	1.02	12.18%	12.39%
210043 - BALTIMORE WASHINGTON MEDICAL CENTER	7256	1224	18	16.87%	16.62%	1.01	12.27%	12.45%
210044 - G.B.M.C.	4658	561	10	12.04%	11.83%	1.02	10.49%	10.68%
210045 - MCCREADY	167	29	0	17.37%	17.37%	1.00	12.77%	12.77%
210048 - HOWARD COUNTY	5587	871	13	15.59%	15.36%	1.02	11.22%	11.39%
210049 - UPPER CHESAPEAKE HEALTH	5346	734	7	13.73%	13.60%	1.01	10.91%	11.02%

HospName	Total Admissions	Total Readmissions	Readmissions Out of Maryland	Readmission Rate	MD Readmission Rate	**Out-of-State (OOS) Ratio**	Case-Mix Adjusted Readmission Rate	Case-Mix Adjusted Rate with OOS Adjustment
210051 - DOCTORS COMMUNITY	4254	750	66	17.63%	16.08%	1.10	11.45%	12.55%
210055 - LAUREL REGIONAL	1094	238	15	21.76%	20.38%	1.07	11.60%	12.38%
210056 - GOOD SAMARITAN	4113	664	4	16.14%	16.05%	1.01	11.85%	11.92%
210057 - SHADY GROVE	4988	616	33	12.35%	11.69%	1.06	9.83%	10.39%
210058 - REHAB & ORTHO	242	16	1	6.61%	6.20%	1.07	6.88%	7.34%
210060 - FT. WASHINGTON	1085	183	45	16.87%	12.72%	1.33	9.48%	12.57%
210061 - ATLANTIC GENERAL	1918	228	23	11.89%	10.69%	1.11	8.93%	9.93%
210062 - SOUTHERN MARYLAND	3615	688	140	19.03%	15.16%	1.26	11.01%	13.82%
210063 - UM ST. JOSEPH	6170	701	13	11.36%	11.15%	1.02	10.55%	10.75%
210064 - LEVINDALE	157	30	0	19.11%	19.11%	1.00	9.77%	9.77%
210065 - HOLY CROSS GERMANTOWN	1106	173	6	15.64%	15.10%	1.04	10.50%	10.88%

APPENDIX VI. MATHEMATICA POLICY RESEARCH – RRIP MODELING

1. Analyze current data trends in National and Maryland Medicare Readmission Rates, as well as Maryland All-Payer Readmission Rates

Actual Readmissions Rates	National Medicare FFS Rate	MD Medicare FFS Rate	All Payer Rate
CY 13	15.38%	16.60%	**12.93%**
CY14	15.49%	16.46%	12.43%
CY 15	15.42%	15.95%	12.02%
CY16 (RY 2018)	15.31%	15.60%	11.54%

2. Project the CY 2017 and CY 2018 National Medicare Readmission Rate, based on multiple projection methods

Projections of National Rate	National Medicare FFS Rate
CY17 - Based on Average Annual Change 2013 - 2016	15.28%
CY17 - Based on Change from 2015 to 2016	15.20%
CY17 - Based on 12 month moving average	15.30%
CY17 - Based on 24 month moving average	15.35%
CY18 - Based on Average Annual Change 2013 - 2016	15.26%
CY18- Based on Change from 2015 to 2016	15.09%
CY18 - Based on 12 month moving average	15.30%
CY18 - Based on 24 month moving average	15.33%

3. Use the lowest projected National Medicare rate for CY 2017 and CY 2018 (observed trend CY 2015-CY2016). Given fluctuations in the data trends, also consider two more rapid decreases in the National Rate.

Use Projection that Yields Lowest National Rate	2015-2016 Trend (.71% Decrease) Observed	1.0% Annual Decrease	1.5% Annual Decrease
CY 2017	15.20%	15.16%	15.08%
CY 2018	15.09%	15.01%	14.85%

4. Calculate the % Cumulative Change in Maryland Medicare Rate that will be needed to meet the National Rate by the end of CY 2018. Calculate this % change on an annual basis.

Translate National Medicare Readmission Reduction to Maryland Medicare Readmission Reduction	**2015-2016 Trend (.71% Decrease) Observed**	**1.0% Annual Decrease**	**1.5% Annual Decrease**
% Cumulative Change in Maryland Medicare Rate Needed to Meet Target in 2018	-3.28%	-3.81%	-4.78%
Per Year Reduction Required in MD Medicare FFS Rate	**-1.65%**	**-1.92%**	**-2.42%**

5. Translate the unadjusted Medicare Target to a case-mix adjusted All-Payer Target through three methods using the rates of change in Maryland Medicare (-6.02%) and the rates of change in Maryland All-Payer (-10.75%).

    1. A Simple Difference between the rates of change, CY 2013-CY 2016. This yields a 4.73% difference.

    2. A Ratio of the rates of change, CY 2013-CY2016. This yields a ratio factor of 0.5604.

    3. A Regression-based factor, taking into account additional rates of change over the same time period. This yields a ratio factor of 0.61.

Projected National Reduction Rate for CY 2017	**-0.71%**	**-1.00%**	**-1.50%**
	All-Payer Reduction Needed in CY 2017 to Meet Waiver Test		
Method 1: Add difference in rates of change to FFS target (-4.73%**)**	**-6.38%**	**-6.65%**	**-7.15%**
Method 2: Use ratio of changes in rates to scale FFS target (0.5597)	**-2.95%**	**-3.43%**	**-4.32%**
Method 3: Use regression-based factor (.61) to scale FFS Target	**-2.71%**	**-3.15%**	**-3.97%**

APPENDIX VII. STAKEHOLDER COMMENT LETTER – CAREFIRST

M. Bruce Edwards
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Networks Management

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April 10, 2016

Chairman Nelson Sabatini
Executive Director Donna Kinzer
Health Services Cost Review Commission
4201 Patterson Avenue
Baltimore, Maryland 21215

Dear Mr. Sabatini and Ms. Kinzer:

The purpose of this letter is to provide general comments regarding the Health Services Cost Review Commission (HSCRC) staff draft recommendation on modifications to the Commission's Readmission Reduction Incentive Program (RRIP) Policy for RY2019. CareFirst is strongly supportive of the HSCRC's efforts to incentivize hospitals to reduce their rates of unnecessary readmissions. Success in this area will both improve the overall quality of care provided by Maryland Hospitals and help the State meet the readmission performance standards as required by the Demonstration agreement with the Centers for Medicare/Medicaid Innovation (CMMI).

We recognize that since the beginning of the Demonstration, Maryland hospitals have met their annual readmission reduction targets and appear to be on track to meet the State's overall requirement to be below the Medicare national readmission rate by the end of CY 2018. However, there are several reasons to be cautious and conservative in establishing targets for RY2019. Despite the State's gradual improvement versus the U.S. over the past 3 years, there are several forecasting uncertainties as well as recognition of the national acceleration in readmission reductions that should be taken into consideration. There are 3 areas we suggest further consideration:

1. **Divergence of CMMI and HSCRC Readmission Data**: As noted in the staff draft recommendation, the remaining substantial divergence in Maryland Medicare readmission rates reported by the HSCRC and the CMMI "adds an additional layer of uncertainty to current projections, and may need to be accounted for in the improvement target." We agree that this should be further investigated.

2. **Continued use of an All Payer Target and the need to "Extrapolate" from the Desired Medicare Target**: The use of an All Payer readmission target requires an extrapolation from the desired level of Maryland Medicare readmission rates to the All Payer readmission rate targets. It is the All Payer target that provides the basis for the improvement incentive structure applied in the RRIP. In past years, the relationship between All Payer readmission rate performance and Maryland Medicare readmission rate performance has varied considerably, as has the method used by staff to extrapolate from the Medicare target to the All Payer target. The current extrapolation methodology utilizes many different statistics, which are subject to variation, and as we have seen in the past has failed to accurately predict the relationship between All Payer and Medicare readmission performance. The predictability of this forecasting is heightened due to the acceleration of readmission reductions nationally. If the relationship between these two targets changes again, and the targets are not rigorous enough to

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incentivize Maryland hospitals to achieve its targeted Medicare readmission reductions, the State will fail to meet its readmission requirement under the Demonstration.

3. **U.S. Medicare Readmission Rate Declines have accelerated**: Much of the State's improvement thus far has been due to the fact that national Medicare readmission rates were initially flat in CY's 2014 and 2015. Recently, the nation has experienced moderate reductions in its Medicare readmission rates (declining by a rate of 1.06% in CY 2016 over CY 2015). This most recent decline is the basis for the various forecasts of U.S. performance in CY 2017 used by Mathematica to forecast the expected national Medicare readmission rate decline in CY 2017 and 2018 (i.e., a forecasted decline ranging from 0.8% to 1.5% per year). Staff characterizes this forecasting approach as "conservative." However, we would note that setting targets based on the most recent U.S. performance would likely be inadequate to induce the required reductions in Maryland Medicare readmission rates should the U.S. return to the rates of decline experienced in CY's 2012 and 2013 (3.36% and 2.40% respectively). In this context, we do not see the forecasting methodology as sufficiently conservative to establish readmission rate reduction targets and associated incentives necessary to ensure success.

Given these forecasting uncertainties coupled with the recently national improvement levels, CareFirst recommends the establishment of a more rigorous standard than the 15.0% cumulative reduction target currently recommended by staff.

Finally, CareFirst believes that the RRIP policy should consider including a factor to account for the impact of Socio-Economic Status (SES) of hospitals' patient populations in measuring readmission rate performance. In March, we presented to the Performance Measurement Workgroup what we believed was a sensible, coherent and empirically based approach to include such a factor. Our analysis found that statewide in CY 2015 our definition of "indigent" patients (i.e., patients with payer designations of Medicaid, Self-Pay, Charity and Dual Eligible) had a case mix adjusted readmission rate of 11.57% versus 8.65% for "non-indigent" patients (i.e., patients in all other payer classes), a difference of nearly 34%. Failure to include a factor in the RRIP to adjust for these differences disadvantages hospitals with high proportions of these patients. We are happy to continue to work with staff so that this important adjustment can be incorporated into the RRIP for RY 2019.

Sincerely,

APPENDIX VIII. STAKEHOLDER COMMENT LETTER – MARYLAND HOSPITAL ASSOCIATION

Maryland
Hospital Association

April 21, 2017

Alyson Schuster, Ph.D.
Associate Director, Performance Measurement
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, Maryland 21215

Dear Ms. Schuster:

On behalf of the 64 hospital and health system members of the Maryland Hospital Association (MHA), we appreciate the opportunity to comment on the *Draft Recommendation for the Readmissions Reduction Incentive Program for Rate Year 2019.* We support the recommendation to maintain the "better of" improvement or attainment performance with the attainment target set in the same manner as last year – best quartile of the base period with an additional two percent reduction – and we support the staff's development of a modified cumulative target to handle the inconsistencies created by the ICD-10 transition.

Setting the annual all-payer improvement target involves making assumptions about two key elements: the national Medicare readmissions improvement and the ratio of Maryland all-payer change to Medicare change. Assumptions about how these key elements will change over the next year result in a range of possible targets. The 4 percent reduction target is within the range that is reasonable under different assumptions, although it is slightly more than statewide improvement over the last three years. Setting a target much beyond historic rates of improvement would likely have little effect on readmissions rates, but would simply increase penalties to hospitals.

All-Payer Targets

	Year	Change in All-Payer Readmissions Rate
Average Change = -3.86%	2013-2014	-4.02%
	2014-2015	-3.22%
	2015-2016	-4.33%

Our view is that the annual improvement target could be set closer to 3.25 percent, because the readmissions policy provides incentives for each hospital to outperform the targets. Achieving the improvement or attainment target merely gets the hospital out of the penalty zone, and hospitals can receive increasing positive rewards for outperforming the targets. Moreover, hospitals' care management and care delivery transformation activities have matured significantly over the three years of the model, and far exceed the activities of hospitals nationally. With Maryland's focus on potentially avoidable utilization, we have seen the rate of Medicare readmissions reduction approach the rate of all-payer reductions – another reason that

the target does not need to be as aggressive as in previous years. Maryland's hospitals are well positioned to continue the progress that has been made in meeting the demonstration target, could be below the national readmissions rate as soon as the end of this year, and will certainly surpass the national performance by the end of 2018.

We appreciate your consideration of our comments and the opportunity to continue working through these issues in the Performance Measurement Work Group.

Sincerely,

Traci La Valle
Vice President

cc: Nelson J. Sabatini, Chairman
Herbert S. Wong, Ph.D., Vice Chairman
Joseph Antos, Ph.D.
Victoria W. Bayless
George H. Bone, M.D.
John M. Colmers
Jack C. Keane
Donna Kinzer, Executive Director

APPENDIX IX. STAKEHOLDER COMMENT LETTER – DHMH MEDICAID

STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
Larry Hogan, Governor - Boyd K. Rutherford, Lt. Governor - Dennis R. Schrader, Secretary

May 3, 2017

Nelson J. Sabatini
Chair
The Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

Dear Chairman Sabatini:

The Medicaid program has reviewed the draft recommendation of the Health Services Cost Review Commission's (HSCRC) Staff for the Readmissions Reduction Incentive Program (RRIP) for rate year (RY) 2019. We are writing in support of the Staff's draft recommendations, in particular the recommendation to continue to set the minimum required reduction benchmark on an all-payer basis.

The Maryland RRIP has proven to be a successful and iterative program that thoughtfully incorporates stakeholder inputs. While the national readmissions program conducted by the Centers for Medicare & Medicaid Services (CMS) focuses on Medicare only, Maryland stakeholders—represented through the HSCRC's Performance Measurement Workgroup—expressed the need for Maryland's program to include all patients, regardless of payer. In addition, for RY 2018, the HSCRC effected a significant policy change to the RRIP, updating the methodology to include an attainment target alongside the existing improvement approach.

The Medicaid program understands that the execution of the RRIP is confounded by several moving parts, including a discrepancy between CMS and Maryland data and the program's dependency on an unknown national trend, in addition to the calculation of a differential to set an all-payer target from the Medicare target. However, the Staff recommendation to stay the course and not effect major changes on the RRIP is indicative of the program's success. Based on calendar year (CY) 2016 annualized projections, Maryland is on track to achieve its contractual obligation to decrease its Medicare readmissions rate to equal or less than the national average rate by the end of the waiver. Preliminary CY 2016 data have shown a 10.79 percent reduction in the all-payer case-mix adjusted readmission rate compared to CY 2013. As of November 2016, 28 hospitals were on track to meet the hospital improvement benchmark of 9.5 percent reduction, with eight additional hospitals on track to achieving the attainment goal of 11.85 percent.

The Medicaid program applauds the HSCRC's foresight in implementing its quality programs to benefit all factions of Maryland's population. Strategies that focus only on Medicare ignore—and risk not addressing—the readmissions issues critical to Medicaid and other payers. Maintaining the all-payer approach to quality programs under the All-Payer Model will ensure the development of strategies that improve the health of all Marylanders while mitigating cost-shifting from Medicare to other payers.

Should the HSCRC change the RRIP to focus only on Medicare, the Department is prepared to develop a Medicaid-only readmissions program. Several other states—such as New York, Texas and Pennsylvania—have implemented Medicaid-only programs, ranging from payment adjustments to non-payment of readmissions.

The Medicaid program commends the HSCRC for its responsiveness to stakeholders and for the progress made to date. We look forward to working with the HSCRC and other stakeholders as the policy is finalized for RY 2019.

If you have any questions, please contact Tricia Roddy, Director for the Office of Planning at 410-767-5809 or tricia.roddy@maryland.gov.

Sincerely,

Shannon M. McMahon
Deputy Secretary for Health Care Financing